Continental Teves

Culpeper, Virginia

E3 Status Second Annual Report

September 2004

Purpose

Continental Teves achieved E3 status as designated by the VA Department of Environmental Quality in September of 2002. The purpose of this report is to inform the Pollution Prevention office of the environmental accomplishments that Continental Teves made in past few years thus re-affirming our E3 status.

Overview

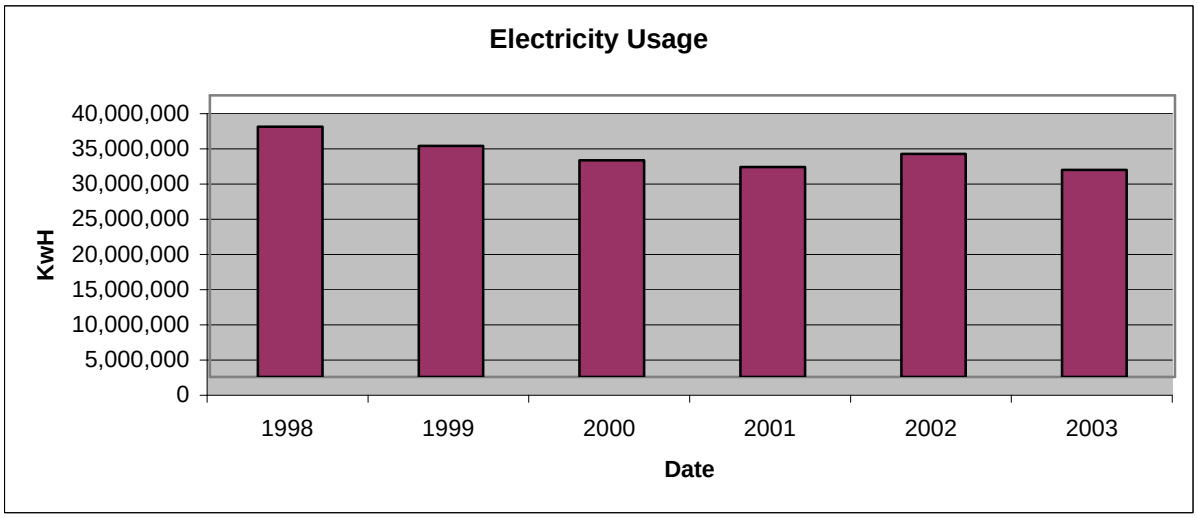
ISO-14001 was the foundation upon which Continental Teves approached this award. ISO-14001 is a voluntary initiative that drives development of an environmental management system that supports pollution prevention, continuous improvement, and compliance with legal regulations. The Culpeper plant successfully passed a third party certification audit to the ISO 14001 system by DQS, GmbH. The plant has made considerable improvements to conserve natural resources, including a significant reduction in the use of electricity, the use of coolants, and the amount of water utilized in the plant. The management's steadfast support for ES&H initiatives was an instrumental element in achieving E3 status. Continental Teves has a long history of pollution prevention, continuous improvement, and regulatory compliance. With that history as a foundation, Continental Teves will continue to find innovative, progressive, and pragmatic solutions to the challenges that arise.

Accomplishments

Electricity Used

Continental Teves has been tracking the electricity used for many years. From 1998 to 2003, using 1998 as a baseline, a 17% reduction of electricity use has occurred as seen by the following table and chart. This decrease in usage can be attributed to many things. Education and awareness, installation of more energy efficient products/machines, and management support were all very vital to the success of this program allowing Continental Teves to reduce electricity usage, benefiting our bottom line and the environment. In 2002 Continental Teves had a slight increase due to some unforeseen issues, such as: an increased demand for a product that was in process of being obsolete (use of inefficient machines) and problems with the production process that increased usage.

Date	1998	1999	2000	2001	2002	2003
Amount (KwH)	35,560,000	32,819,907	30,751,000	29,799,000	31,696,000	29,428,000



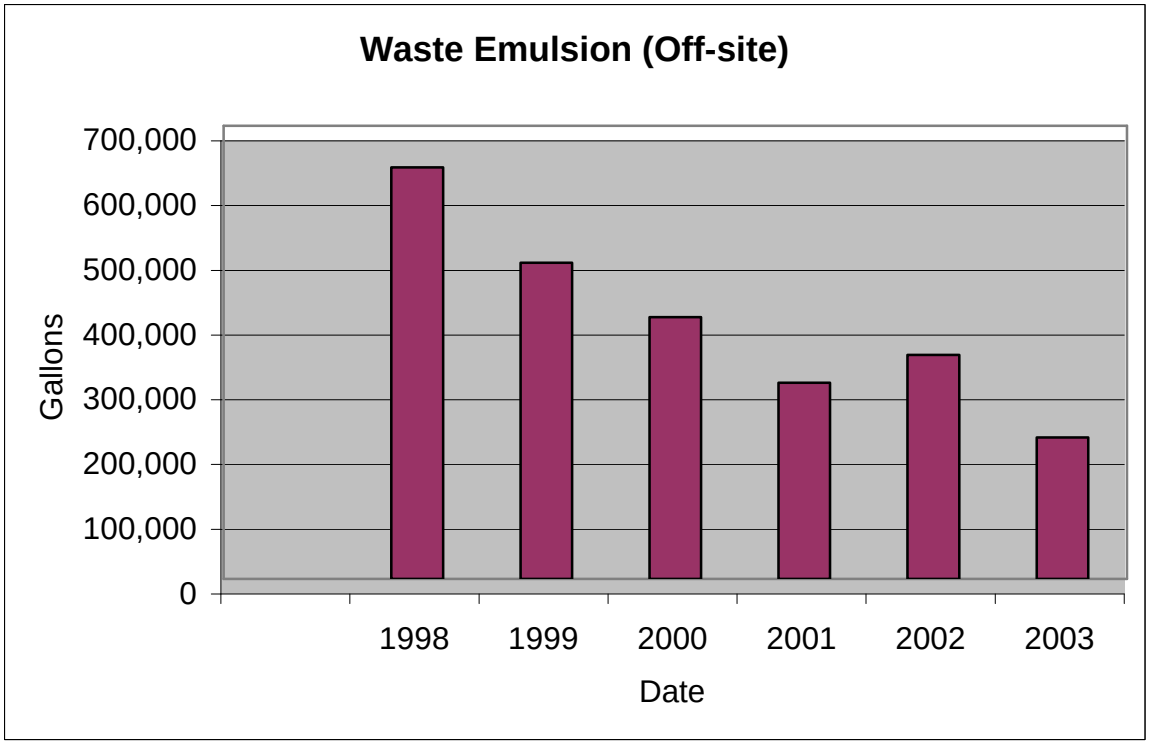
By reducing the amount of electricity used at the Culpeper plant, the savings for 2003 were approximately $72,000. Using 1998 as a baseline, the savings are approximately $194,384. These numbers are determined based on a flat rate of $0.0317/KwH. These savings help show that an increased awareness of the environmental impact of operations can lead to savings in the work place.

Waste Coolant Disposal

The Continental Teves plant in Culpeper, VA is the machining center for aluminum valve blocks in the North American Region for Continental Teves. As part of this process metalworking fluids (coolant) is widely used throughout our operations. It recently became apparent that this operation has direct and indirect costs associated with it in almost every aspect of the process. The coolant is expensive to purchase, expensive in disposal, tool life is affected, quality of finished parts is affected, etc. Due to these cost considerations, the facility takes a very close look at all functions of this resource.

From 1998 until 2003, using 1998 as the baseline, a 66% reduction in waste coolant sent off-site for disposal was observed. This decrease can be attributed to many factors such as: training, increased efficiency with evaporation, improved product (coolant), reuse of coolant, etc**. From the 1998 levels, the savings are approximately $104,400 using $0.25/gal as a disposal cost.** These savings are very significant.

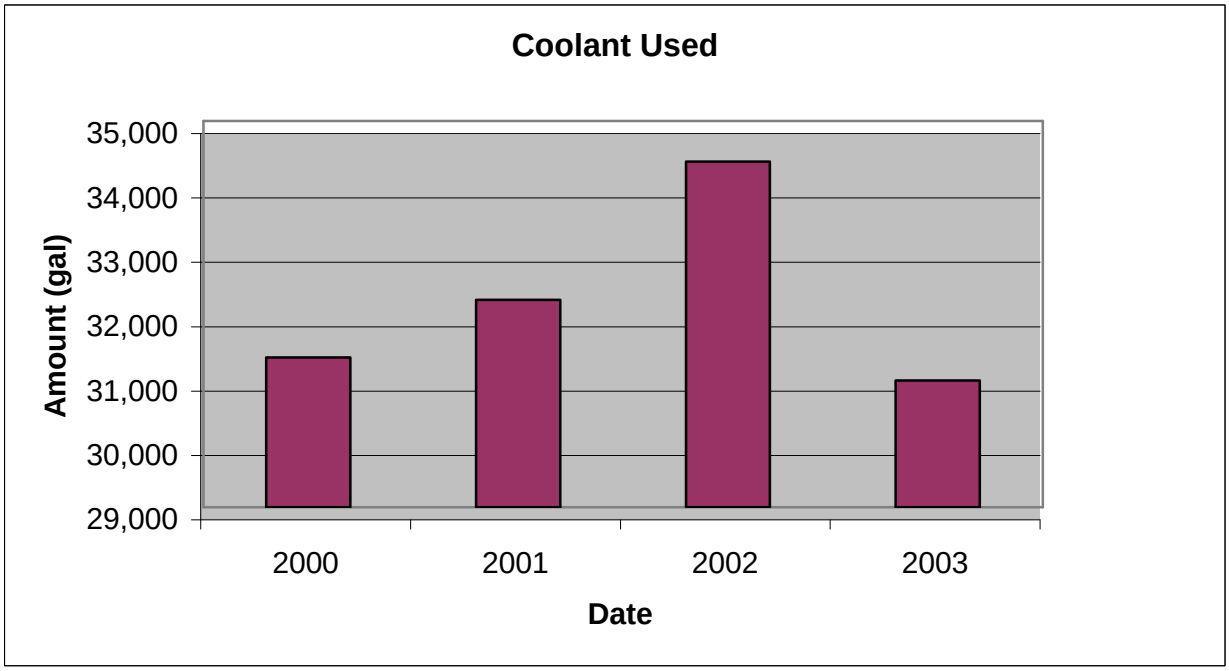
Date	1998	1999	2000	2001	2002	2003
Amount (gal)	635,901	488,540	404,220	303,274	346,230	218,300



Coolant Usage

As stated above, the Continental Teves, Culpeper plant is a machining facility. Metal working fluid (coolant) is an integral part of all processes. The production, quality, and cost of our product is very dependant on this material. In 2002, Continental Teves decided to change coolants to a more environmentally friendly product. In 2001 Continental Teves used a coolant that contained polychlorinated alkanes. This material was part of the list for the Form R or Toxic Release Inventory (TRI). The peak TRI amount was 14,514 pounds. This amount compares to approximately 7,062 pounds. However, the facility decided to go further and make a commitment to eliminate the chlorinated components of the coolant. In calendar year 2002, a coolant was tested without this component. Through a very strenuous quality assurance/quality control procedure, this coolant was accepted. For calendar year 2003, the Continental Teves facility did not have any TRI releases. This situation is a benefit to the employees as well as the environment. In addition to this aspect, the coolant usage was reduced from 2002 levels. We have an active program in place to reduce coolant use. It involves a partnership with the manufacturer of our current coolant. They have a vested interest in coolant usage. We anticipate levels to continue to dwindle in the future. We reduced coolant usage by almost 10% from 2002 levels. **This decrease resulted in a savings of $42,849 using a direct coolant cost of $12.61/gallon.**

Date	2000	2001	2002	2003
Amount (gal)	31,328	32,222	34,368	30,970



Active Remediation

The Culpeper facility has been proceeding with a RCRA Corrective Action program as designated by the Commonwealth of Virginia. In the early to mid 1980s, this facility used a degreaser called tetrachloroethylene, commonly called, PCE. In the early 1990s (1991), ITT Automotive (former owner of this facility) received a consent decree for the contamination at the site. PCE has exceeded the groundwater protection standard in some monitoring wells. There are also isolated issues with chromium.

During the years through many delays, the facility has been attempting to "get their hands around" this situation. In 1995 a Post-Closure permit was issued to the facility. When Continental AG purchased this facility, a proactive approach was taken to the proposed clean up. In 2003 a permit was issued that allowed the facility to remediate on a site-wide basis. During this permit, the facility worked very closely with individuals at the state level. This permit is a win-win situation. The state knows that Continental Teves is committed to cleaning up the environment, and Continental Teves is allowed to move forward with cleanup on a site-wide basis.

The Continental Teves facility would like to continue the proactive approach taken with the groundwater remediation system. Management believes that the longer you wait to move with this initiative, the more it will cost. A very progressively, pragmatic approach has been adopted. The systems for cleanup (chrome and VOCs) were implemented in November and December 2003. They have been performing very well.

Future Goals

The Continental Teves facility is always working towards pollution prevention and regulatory compliance. There is a strong commitment from management that allows this facility to explore many opportunities to help the environment as well as the business. Some of the specific activities are described below.

Water Use

The facility is strongly investigating the opportunity to reduce potable water usage by re-using existing water supplies. For 2003 our potable water usage went up dramatically from 2002 levels; however, there is an explanation for this increase. The Continental Teves, Culpeper plant implemented a closed-loop HVAC system for the plant. With this system the plant was air-conditioned for the first time in its history, but this system's cooling process uses a lot of water. The positive side of this equation is that the Culpeper plant is using the chillers associated with this HVAC system to replace older, outdated chillers used for our machines in the production process.

Oil Usage

In 2004 the Culpeper facility has been/will be working diligently to reduce the oil usage at our facility. Oil use has been consistently higher than expected due to leaks and small internal spills. The consequences of excessive use are far reaching. The oil reaches our coolant system possibly causing production and quality issues, which in turn drives up cost.

Our main machines are currently undergoing an upgrade. The Culpeper plant will be producing a new generation electronic brake system, valve block. With this change, many of our current pieces of equipment will be renovated and upgraded. We look for our oil use to decrease.

Compliance Issues

From September 2003 to September 2004, no compliance issues were associated with the Continental Teves, Culpeper plant.

Contact Information

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WASTE AVOIDED / REDUCED	AMOUNT	COST SAVINGS	PERCENT REDUCTION	NOTES
Hazardous Material Use Reduction (pounds, gallons)	0	0	0	Our hazardous material use actually increased (acid / caustic soda) – **Our coolant is not hazardous.**
Hazardous Waste (tons, pounds, gallons)	0	0	0	
Solid Waste Avoided (tons, pounds)	-	-	-	See recycling
Solid Waste Recycling (pounds)	2,406,000	-	+50.3% (increase)	
Household Hazardous Waste (pounds, gallons)	0	0	0	
Water Usage (gallons)	5,090,500	0	0	
Air Emissions (including vehicle emissions)* (tons, pounds)	14.8 tons	0	0	
Energy Usage* ** (KwH, MwH, Btu, mmBrtu)	34,649,495	>$72,000	5.3%	This includes electricity and natural gas.